CHRISTMAS PARTY
December 1,1987

La-Ace is having their 8th annual Christmas party and all current and past members are being invited. Come and meet some old friends that you haven't seen in years.

Now that the year is almost over and everything 'official' is over, all there is left to do is party, so let's party. This year the club will be providing all the season goodies. We will also be giving away truckloads of new toys, including the New Atari Game Machine. Everyone will walk away a winner.

LA-ACE MEETING MINUTES
NOVEMBER 1987
EDWIN DAVENPORT

Hello, welcome to my first (and last) edition of the LA-ACE MEETING MINUTES. This is my first time ever trying to do the minutes of anyone's meeting, so bear with me. I am temporarily filling for Doug Kelly, who will by back on the keyboard in January, upon completion of his college classes.

Thanks to those of you that came out into the storm in order to attend the November meeting, and vote in the club's officer elections. First of all the meeting was delayed, but finally called to order at approximately 7:30 pm, when there were enough people there to establish a quorum, for voting purposes. The meeting was opened by President Bill Lurie. Since there was going to be an abbreviated meeting this month, due to the elections, there was a brief question and answer period and then the meeting was turned over to Warren Farina, the Election Committee Chairman. Nominations were opened for anyone else who might be interested in running for an office , but, no one else came forward. The nominations were closed and the elections were held.

The following officers were elected.

President	Bill Lurie
Vice President	Warren Farina
Treasurer	Michele Rose
Secretary	Doug Kelly

All officers were elected by a near unanimous vote of the members present.

After the elections the break was taken, after which the door prizes were raffled off. Our thanks to those computer stores that supported this month with door prize donations. Comsoft donated FaST-Key for the ST. Logical Choice donated the Animation Station, by Suncom, Typesetter ST, by XLent Software. Other software was also donated by other supporters but I am sorry to say that I was unable to get their names before time to go to the presses. They will be given credit next month. The remainder of all the clubs door prizes will be given away at the December meeting. Be sure to attend.

OASIS IN THE DESERT
by
Rich Monosson
LAACE BBS SYSOP

It seems like only a couple of weeks since I wrote the last installment for this series on the changes to the LAACE BBS. Alot has happened since the last article. The following will keep you up-to-date of exactly what is going on with the BBS.

I was able to get online with that OASIS system in the Boston area and obtained a survey program and a trivia program. I have just installed the trivia program. I thought that it would be better to do first because we could get more fun out of it. Now that I understand how that works, I think the survey program will install quite easily. I did take a survey on the Boston-area OASIS system and it seemed quite usefull. Both of these programs display their results online, the trivia game displaying the top ten players.

The trivia game as it stands right now has five different games: OASIS's first trivia game, potluck trivia, ATARI programmers trivia, Computer science trivia and Music trivia. Each is separate and scored individually. A Star Trek trivia game will be added as soon as I can download it from Boston. HINT: Answer quickly, you are scored on time as well as correct answers.

The survey has been a bit more troublesome than the other improvements. I have not gotten it to work yet but have just started working with it. Hopefully, I'll have it going before you read this. What the questions will be, I don't know yet. Any suggestions? It comes with some sort of 8-bit software survey.

The database I talked about last month has also been installed, at least in part. I took the most relevant files from the old database and converted them to OASIS format. This includes the BOISE-UG national BBS list, software and hardware manufacturers, LAACE officers, L.A. Area user groups, etc.

There are many things I need to learn about before making too many more changes. The list of about a dozen various questions I left on the Boston-Oasis, when answered, will help me organize the entire structure of the system, including the database, help files and download directory.

Also on that OASIS system were tens if not a hundred various utilities, games, modifications and ideas for improving OASIS. Many of these files have been uploaded to that system from many of the OASIS SYSOPS from around the country. I was able to download only a few things during the brief time I had.

Day-to-day maintenance takes up most of the time I would otherwise spend on the above features. Don't get me wrong, this time is spent making uploads available to the users. As I mentioned last month I get messages with a brief file description of the upload. I transfer the message for each uploaded file to the new upload message base, then I transfer the file. We seem to be averaging about five to ten uploads a week.

The number of callers have steadily increased at the same time--about 200 a week now and rising. This means more messages, uploads and of course more busy signals.

Maybe I can make some real progress by Christmas.....By the way, we wish you the best of holidays.........Until next year...

Talking With Other ST Computers

Using the MIDI port for communicating

by Richard Leinecker
Author of *"Your ST Comes Alive!"*

Connecting computers may be done for a variety of reasons. This article presents some ideas that you may find helpful in developing applications. The MIDI port is used because it is easy to program, the wire connections are minimal, and the other ports are kept free for other things.

For starters, it would be wise to use only two computers. The hardware is simple. It includes four five-pin DIN plugs and two pieces of two-conductor wire. One of the two connections are made from the first computer's MIDI out socket to the second computer's MIDI in socket. The other connection is made from the second computer's MIDI out socket to the first computer's MIDI in socket. Figure 1 is a block diagram.


```
┌─────────────────────────────┐
│ Computer 1                  │
├──────────────┬──────────────┤
│ MIDI OUT     │ MIDI    IN   │
└──────────────┴──────────────┘

┌──────────────┬──────────────┐
│ MIDI  IN     │ MIDI OUT     │
├──────────────┴──────────────┤
│ Computer 2                  │
└─────────────────────────────┘
```
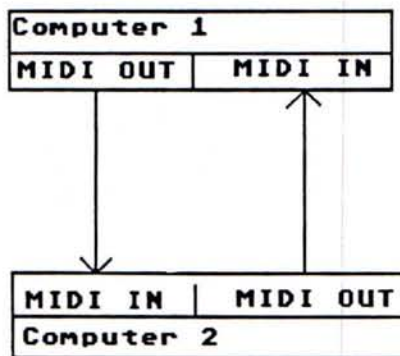
Figure 1

The MIDI in and the MIDI out socket configurations will be discussed first. Looking at the computer, identify pins 4 and 5 of the MIDI In socket. Pin 4 is labeled "OUT Transmit Data" and pin 5 is labeled "OUT Loop Return." Next, identify pins 4 and 5 of the MIDI out socket. Pin 4 is labeled "IN Receive Data" and pin 5 is labeled "IN Loop Return." Figure 2 is a diagram of the MIDI ports.

```
MIDI Out
--------
1- THRU Transmit Data
2- Shield Ground
3- THRU Loop Return
4- OUT Transmit Data
5- OUT Loop Return
MIDI In
-------
1- Not Connected
2- Not Connected
3- Not Connected
4- IN Receive Data
5- IN Loop Return
```

Figure 2

Make sure that the 5 pin DIN plugs are in a 180 degree configuration as some versions are in 270 degree form. Look at the DIN plug and notice how it will plug into the socket. It is important that you do not get the connection reversed since you may be looking at it backwards when you solder. Taking one two-conductor cable, solder to pin 4 and 5 of one din plug. Now, follow the wire that you have already soldered to pin 4 and solder it to pin 4 of the other din plug. Do the same with pin 5. Follow it through and solder it to pin 5 of the other plug. This completes connecting cable 1. You should duplicate these exact instructions for cable 2. Figure 3 is a diagram of the connections.


```
┌─────────────────────────────┐
│ Computer 1                  │
├──────────────┬──────────────┤
│ MIDI OUT     │ MIDI IN      │
│  4   5       │  4   5       │
└──────────────┴──────────────┘

┌──────────────┬──────────────┐
│  4   5       │  4   5       │
│ MIDI IN      │ MIDI OUT     │
├──────────────┴──────────────┤
│ Computer 2                  │
└─────────────────────────────┘
```
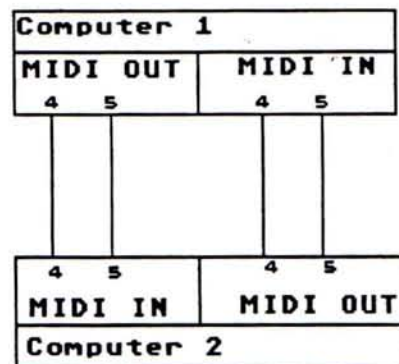
Figure 3

Next, you must plug the end of one cable into the MIDI out socket of the first computer and plug the other end of this cable into the MIDI in socket of the second computer. The second connecting cable should be connected from the MIDI out socket of the second computer to the MIDI in socket of the first computer. This is all of the hardware necessary to connect two ST computers.

The programming aspect is not too difficult. There is a demonstration program on the Computer Spectrum BBS called NETWORK.PRG. This program checks for a keypress. If there has been a keypress, it sends the character out over the MIDI port using the Bconout command. Since the character is gotten from the keyboard using Crawcin, it must be printed on the screen also. The program then checks for incoming data from the MIDI port using the Bconstat command. If there is a character waiting, the Bconin command is used to get it. Bconin waits for a character and does not return until it gets one. Thus, the

(continued...)

Talking With Other STs...(continued...)

data status check using Bconstat is necessary.

Two computers may not be enough for many applications. There are two routes to go at this point, the daisy chain scheme or the star scheme. The daisy chain configuration sends data down a chain, sequentially, from one computer to the next. An identification package is sent which contains source and destination information. Figure 4, shown below, is a block diagram of such a daisy chain configuration.
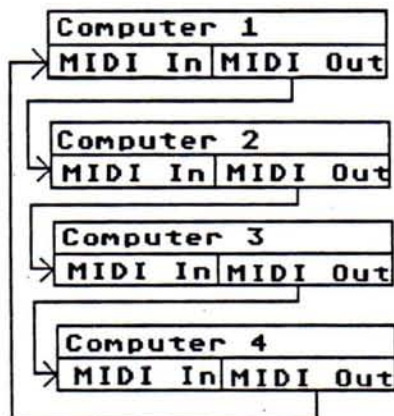

Figure 4

To illustrate how the above system might be used, a hypothetical data transfer on a hypothetical system will be described. Bear in mind that this is a great oversimplification and is meant for illustrative purposes only. First, the source computer sends two bytes, the source number and the destination number. Suppose that the source computer is 1 and the destination computer is 3. The first byte will be a 1 and the second byte will be a 3. This information tells the destination computer and all computers in between that the data which will follow must be relayed to computer 3. All other computers will be notified that the transfer is taking place so that they will not interrupt with their own data transfer initiation. This data is received by computer 2 and then passed on to computer 3. Computer 3 knows not

to send it any further because it is the destination computer. Computer 1 then sends a package indicating that all of the data has been sent. From this point, any of the computers may initiate a data transfer.

The variations on the above data transfer system are endless. The complexities are also much greater than the previous paragraph would indicate. Recall that the above paragraph was only a hypothetical system.

The hardware for this system is just as simple as the two computer system. Beginning with the first computer, each computer's MIDI out port is connected to the next computer's MIDI in port. At the end of the chain, the last computer's MIDI out port will be connected to the first computer's MIDI in port. Many more than 4 computers can be connected in this manner.

Another way of networking computers would be in a star configuration. To carry this out, all computers could listen and only respond when their identification number is called. This may rob each computer of processor time as it listens for its ID number and ignores all other data. The ST's MIDI port is interrupt driven, so the data would appear in the buffer regardless of the ID number. These are problems that could be solved through software techniques.

□

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At a recent Atari show in Dusseldorf, W. Germany, Shiraz Shivji, designer of the Atari ST series of computers, mentioned several new items expected from Atari during the next year or so. First, was the CD-ROM, to be audio-compatible, and expected to be selling for under $500, by Christmas of this year. *(At least this would tie to Atari's recent offer to purchase Federated electronic stores. - Ed.)* Also mentioned was an anticipated RISC- type processor unit to be connected to the new Megas, as well as some "blue-sky" machines, including a 68030-based unit, complete with 68222, and SASI. No time frame on this one. It was also estimated that the long-projected "EST" *might* be seen by COMDEX/Las Vegas in November!

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GFA DRAFT
A Two-Dimensional CADD Program
Review by Mike Gibbons

For the person with complex drafting needs or even a novice design student, *GFA DRAFT* should satisfy all your drawing desires. It is a drafting and Computer Aided Design tool, not a pretty painting program. But with it's ease of use and functional menus, this software is a designer's paintbrush and canvass.

The drawing begins in a work window that scrolls across your picture surface. A large, scaled drawing area is available, up to a maximum of 658 x 658 milimeters. Your window has the familiar GEM menu across the top of the screen and a location, help, status line may be displayed at the bottom. There are preset zooming scales from 1/4 of the window size, equal to 38 x 22 mm, up to a scale of 4 times, or 612 x 352 mm. When you change the perspective by zooming, it does not change the dimensions of an object. The screen update after the zoom or with a window change is acceptably fast, and is much faster than with a product such as Auto Cadd on an IBM PC. The scale in millimeters can be changed to inches if you prefer, and various grid sizes may be set. The cursor is configured as a small cross hair or as a screen wide crossbar which is very useful in object alignment. The auto dimension function made my attempts at scale drawing extremely simple.

There are two Gem based menus to choose from and the screen may be changed to inverse if you find the light on dark setting more desirable. This access to GEM will quicken the learning curve of GFA DRAFT, and the manual contains a well written tutorial with excellent practice examples.

The program allows layered drawing with up to ten layers displayed at one time. You may work with up to 255 layers and can achieve a cut away view effect by shading covering areas on upper layers. Various shading patterns are available as well as hatching.

The line functions are fully featured and supported by even more complex circle, ellipse, square, and arc functions. You may store objects as symbols as with electronic symbols or floor plan objects. These symbols may be called

in at any time or defined to function keys. This makes repetitive placement of objects in a drawing, as in floor plan design, quick and simple.

The text placed in a drawing appears at the cross hair and may be drawn in four alternative directions. Normal text which is read left to right is the default, 90 degree text is read from the right. Text may also be placed at 270 degrees, so as to be read from the left. If placed with the 180 degree selection, the text is vertical and is read from the top. Text may also be entered appearing as a reflection, similar to what you would see in a mirror.

A window may be defined and objects and text within the window may be manipulated at will. Corners may be made to appear rounded and wall segments may be forced to always meet. You can copy, stretch, rotate, or delete any given area of a drawing. The program is not copy-protected and works well on a hard disk. The available memory is displayed from a menu selection as are all the other program option settings.

The program supports both printers and plotters and comes with a configuration editor in case your printer definition isn't on the disk. The selection of printers is wide and includes most popular 9 and 24 pin devices. I tested the software using an Epson LQ 1000 which is a 24 pin printer. You can select a quicker draft image or a slower plotting high quality image. The high quality image from a 24 pin printer is as good as I would expect, exceptional. I appreciate software that takes advantage of my decision to purchase a higher quality printer.

Both monochrome and color monitors are supported and the documentation is clearly and concisely written. The excitement this product brings is only limited by your imagination. For the creation of a floor plan of your new castle, or that of a complex integrated circuit, this product will guide your mental flow to the output of your printer, quickly and flawlessly.

CX22 TRAKBALL MOD FOR THE ST
A "You-Build-It" Project!
By D.E. Wenzelburger, S*P*A*C*E

A while back, after fighting for space on my desk for my mouse, I thought that a trakball, under some circumstances, would be nicer to use. Until Atari Trek I was unsure of which model to use. There I found that an STDIO member had a working setup using the Atari model CX22. The following is a quick (and probably not the only) method to modify the Atari trakball for use on an ST computer.

First a list of parts and equipment needed:

(1) CX22 Trakball.
(2) Joystick extender cable (purchased from Radio Shack).
(3) 2 feet of 24 or 26 gauge hookup wire.
(4) Soldering iron and solder.
(5) Philips screwdriver.
(6) Wire cutter.
(7) Ohmeter (if possible).

And now on with the show. The purpose of the joystick extender cable is that the existing cable does not contain enough leads, so we have to replace it. The new cable may be a bit longer than you'd like. I'll leave that up to you. The easiest way to tell you which end to cut off is to plug one end into your ST (turned off of course!!) and cut off the free end. It's also the *male end* that gets cut.

Next unscrew the four screws on the bottom of the CX22, and carefully pull the two halves apart. (Warning, these are sometimes pretty stiff). Remove the plug from the circuit board. Also remove the "Q" ball and the two shafts. Unscrew the screws on the circuit board and remove it.

See figures 1 & 2. Carefully cut the foil traces as shown in Figures 1 & 2. Using Table 1, connect the test points show with the hook-up wire.

Reinstall circuit board and screws.

To be on the safe side, it's a good idea to check out the new cord. I wouldn't trust Radio Shack to always use the same color wires in their cables. Use Table 2 and Figure 3 to verify that your's is the same as mine.

Now back to the trakball case. Remove all of the red wire from the trigger buttons.

Next, carefully pull the black leads on P1. They and their contact should pull from the plug. Cut off the black wire going to the old cable.

The next step may be tricky. I was able to pull the rest of the wires out of P1 without damaging it. If all else fails you can always solder the cable directly to J1.

Carefully strip off enough covering on the new joystick cable so that the wires can reach the trigger switches.

Next I applied enough plastic tape around the end of the cable so that when the cover is on there is enough resistance the cable will not pull out.

Per table 3, connect the new joystick cable. I reused the old plug by cutting some of the plastic dividers down to get a soldering iron on-to the connection. Reconnect plug, replace shafts and "Q" ball, and put cover back on.

The switch on the left hand side must be in the JOYSTICK position for this modification to work. If for some reason it fails to work, carefully recheck the trace cuttings and your P1 connector wiring.
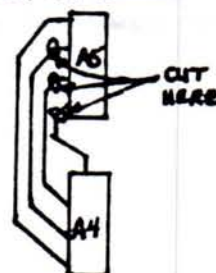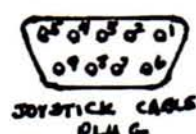
FIGURE 1
TOP OF BOARD

FIGURE 2
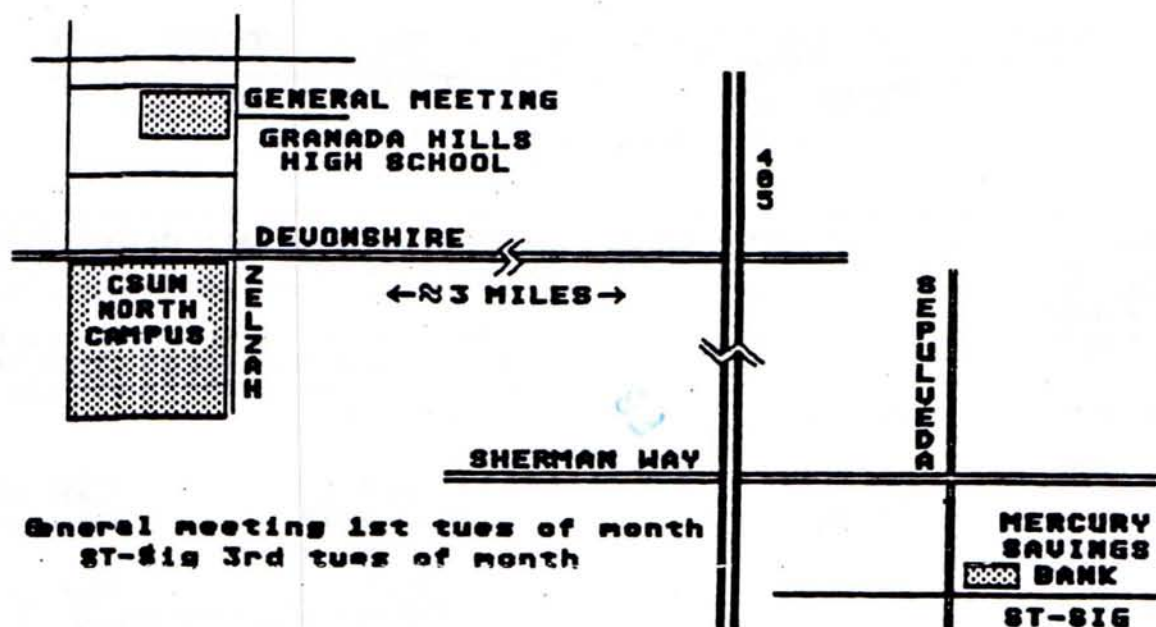BOTTOM OF BOARD

FIGURE 3

JOYSTICK CABLE PLUG

TABLE 1

TP1	to	TP9
TP2	to	TP12
TP3	to	TP11
TP4	to	TP10

TABLE 2

1.	WHITE	6.	ORANGE
2.	BLUE	7.	RED
3.	GREEN	8.	BLACK
4.	BROWN	9.	YELLOW
5.	GRAY		

TABLE 3

BLACK	Gnd	J1-1	(Solder to contact with other BLACK wire.)
RED	+5	J1-2	
GREEN	XA	J1-3	
BROWN	XB	J1-4	
WHITE	YB	J1-5	
BLUE	YA	J1-6	
ORANGE	L. Button		(where RED was)
YELLOW	R. Button		(where RED was)

::::::::::::::::::::::::::::::::::::::

GENERAL MEETING
GRANADA HILLS
HIGH SCHOOL

DEVONSHIRE

CSUN NORTH CAMPUS

ZELZAH

405

SEPULVEDA

←≈3 MILES→

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General meeting 1st tues of month
ST-Sig 3rd tues of month

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